



Maths Small Group – The Number Arc

The Number Arc

The number arc is the mathematical equivalent of the alphabet arc. Any object with numbers on them can be used to be part of this multisensory approach to teaching early number sequencing, counting, numerosity and one to one correspondence skills.

Start with numbers you know the children in the group can sequence and add one at a time to build up confidence and accuracy.



Start by developing **sequencing and number recognition** skills. The photos demonstrate using peg people, log slices with numbers on them and some coloured wooden numbers. Plastic, foam or wooden numbers could also be used. Bottle tops make a good alternative to laminated number cards as they are easy to move. For groups use larger number resources on the floor if space allows. Paper plates are good for this.

Suggested activities:

- Share out the numbers in a random order and the children place them in an arc shape in the correct order. Make sure they are saying the number as they place it.
- If space allows each pupil could have their own set of numbers to sequence into an arc shape in front of them.
- Place wooden, foam or plastic numbers in a feely bag – can the pupils take turns to identify a number by feeling the shape? Can they match it to the corresponding number in the arc?
- Can they point to the number you say as quick as they can? If using a floor number arc can they jump to the number you say?
- Use a pointing stick for them to point to a number as you say it.
- Ask the pupil to close their eyes as you remove a number/numbers from the arc – can they name the number/numbers missing without having to count from 1?
- As above but swap the position of 2 numbers – can they correct the error?
- Match a Numicon shape to each number – place the numicon shapes in a feely bag – pupils take turns to feel and identify the numicon and place it next to the corresponding number.
- Count objects into the holes in the Numicon shape to develop counting in sequence and with one-to-one correspondence.
- Write a series of 3 numbers on a card and show the pupils for 3 seconds, remove the card and ask the pupils to recall the numbers and remove them from the arc in the same order. Increase the difficulty with 4 and then 5 numbers as appropriate.
- Say a random series of numbers. The pupil repeats the series and takes them from the arc and arranges them in numerical order. Start with 3 numbers and increase gradually to 5.



- With the number arc out have another set of numbers in a bag and try one of these activities:
 - As they take a number from the bag can they point to the corresponding number to make a target number bond i.e. if working with numbers to 5 practice bonds for 5.
 - Practice identifying bigger and smaller – take a number from the bag and point to a bigger number, a smaller number.
 - Take a number from the bag and start counting from that number i.e. if they take out 4 count 4,5,6.

Rote Counting

- Ask the pupil to count before setting out the numbers.
- Can they say the number sequence as fast as they can, in a silly voice, can they sing or rap the numbers?
- In a group can they say a number each in sequence going around in a circle?

Number Recognition

- Show numbers in a random order and ask the pupils to name them.
- Pull numbers out of a feely bag and name them.
- Lay out numbers in a random order on the floor – can the pupils walk / jump around the track saying the numbers?

1:1 correspondence

- As part of the number arc session build in tasks to practice counting with one-to-one correspondence. Select a number and ask the pupils to count that quantity of objects.

Subitising

- Sequence dot pattern pictures.
- Roll a dice and find the corresponding number.
- Make dot patterns for a given number using glass nuggets / bottle tops /. Counting objects (that are all the same size)

Estimation

- Show a group of objects, estimate how many and select an appropriate estimated number from the arc.
- How many are in a jar, feely bag.
- Estimate to sequence pictures of quantity.

Number Formation

- Number formation can be incorporated into the number arc session using multi-sensory writing activities for target numbers. (See appendix below for ideas)

Appendix

Number Formation Activities

Write the numbers in a rice / lentil / sand / glitter / foam tray with your finger.
Make sure you are saying the number as writing it.



Use glitter glue to make a number for tracing over with your finger to practice forming correctly.



Make numbers from Wikkisticks, pipe cleaners or playdough and then encourage the pupil to trace around them with their fingers to practice the correct formation.



Make a paint-filled sensory bag for the pupils to practice forming numbers. Simply put paint in a ziplock bag and seal it with tape so it doesn't leak. Make sure you don't put too much paint in, or you won't be able to see what is written.

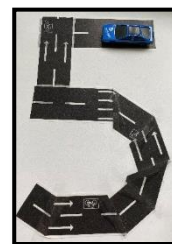
Alternatively, you can just use finger paints, or rainbow draw.



Make tactile numbers from textured scraps of wallpaper or sandpaper. They can then be traced over with a finger to practice letter formation.



Search online for printable road-themed numbers, print and use a toy car to practice forming the number. Alternatively, use 'road' tape to make a number shape.



Explore number formation or finger paint apps on an iPad or tablet. They are great practice and fun too.

